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Plougmann & Vingtoft

22 NOV. 2004

From the  
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

Pjn/9BL

## PCT

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### NOTIFICATION OF TRANSMITTAL OF THE INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY (PCT Rule 71.1)

Date of mailing (day/month/year)	18.11.2004
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Applicant's or agent's file reference 32711 PC 01	<b>IMPORTANT NOTIFICATION</b>
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International application No. PCT/DK 03/00546	International filing date (day/month/year) 15.08.2003	Priority date (day/month/year) 15.08.2002
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Applicant PROAC APS et al.
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1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary report on patentability and its annexes, if any, established on the international application.
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.

#### 4. REMINDER

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary report on patentability. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

The applicant's attention is drawn to Article 33(5), which provides that the criteria of novelty, inventive step and industrial applicability described in Article 33(2) to (4) merely serve the purposes of international preliminary examination and that "any Contracting State may apply additional or different criteria for the purposes of deciding whether, in that State, the claimed inventions is patentable or not" (see also Article 27(5)). Such additional criteria may relate, for example, to exemptions from patentability, requirements for enabling disclosure, clarity and support for the claims.

Name and mailing address of the international preliminary examining authority:	Authorized Officer
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 <p>European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465</p>	<p>Pierre, L  Tel. +49 89 2399-6064</p>
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22 NOV. 2004



# PATENT COOPERATION TREATY

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## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

15 FEB 2005

Applicant's or agent's file reference 32711 PC 01	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/PEA/4-16)	
International application No. PCT/DK 03/00546	International filing date (day/month/year) 15.08.2003	Priority date (day/month/year) 15.08.2002
International Patent Classification (IPC) or both national classification and IPC E05B37/00		
Applicant PROAC APS et al.		
<p>1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 5 sheets, including this cover sheet.</p> <p><input checked="" type="checkbox"/> This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of 3 sheets.</p>		
<p>3. This report contains indications relating to the following items:</p> <p>I <input checked="" type="checkbox"/> Basis of the opinion</p> <p>II <input type="checkbox"/> Priority</p> <p>III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p>IV <input type="checkbox"/> Lack of unity of invention</p> <p>V <input checked="" type="checkbox"/> Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p>VI <input type="checkbox"/> Certain documents cited</p> <p>VII <input checked="" type="checkbox"/> Certain defects in the international application</p> <p>VIII <input type="checkbox"/> Certain observations on the international application</p>		
Date of submission of the demand  15.03.2004	Date of completion of this report:  18.11.2004	
Name and mailing address of the international preliminary examining authority:   European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized Officer  Alexopoulos, T  Telephone No. +49 89 2399-2853  	

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. **PCT/DK 03/00546**

**I. Basis of the report**

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

**Description, Pages**

1-26 as originally filed

**Claims, Numbers**

1-28 received on 21.10.2004 with letter of 21.10.2004

**Drawings, Sheets**

1/18-18/18 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).  
☐ the language of publication of the international application (under Rule 48.3(b)).  
☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.  
☐ filed together with the international application in computer readable form.  
☐ furnished subsequently to this Authority in written form.  
☐ furnished subsequently to this Authority in computer readable form.  
☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.  
☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:  
☐ the claims, Nos.:  
☐ the drawings, sheets:

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. **PCT/DK 03/00546**

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

*(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)*

6. Additional observations, if necessary:

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

**1. Statement**

Novelty (N)	Yes: Claims	1-28
	No: Claims	
Inventive step (IS)	Yes: Claims	2-28
	No: Claims	
Industrial applicability (IA)	Yes: Claims	2-28
	No: Claims	

**2. Citations and explanations**

**see separate sheet**

**VII. Certain defects in the international application**

The following defects in the form or contents of the international application have been noted:

**see separate sheet**

**INTERNATIONAL PRELIMINARY  
REPORT ON PATENTABILITY  
(SEPARATE SHEET)**

International application No.

**PCT/DK 03/00546**

**Re Item V**

**Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

**Claim 1:**

Prior art US 4 454 824 A, discloses a safety-fastener to be secured by fastening, said fastener comprising at least a threaded tip and a rod, the threaded tip and rod being interconnected in a joint allowing transmission of rotational movement from the rod to the threaded tip in one locked state and preventing transmission of rotational movement from the rod to the threaded tip in another unlocked state.

**Problem:** To improve the security of the safety-fastener.

**Solution:** The joint and at least a part of the locking element is positioned at a distance below the surface of the structure to which the safety-fastener is fastened according to claim 1. There is no lead in the available prior art to such a safety-fastener.

**Claim 22:**

There is likewise no lead in the prior art to the lock safety-fastener of claim 22 wherein the lock in its locked state rotates freely around the lock accepting section of the fastener.

**Claims 2-21, 23-28:**

Claims 2-21, 23-28 are dependent on claims 1, 22 and as such also meet the requirements of the PCT with respect to novelty and inventive step.

**Re Item VII**

**Certain defects in the international application**

The features of the claims are not provided with reference signs placed in parentheses (Rule 6.2(b) PCT).

Contrary to the requirements of Rule 5.1(a)(ii) PCT, the relevant background art disclosed in the documents US 4 454 824 A and GB 323 444 A is not mentioned in the description, nor are these documents identified therein.

**INTERNATIONAL PRELIMINARY  
REPORT ON PATENTABILITY  
(SEPARATE SHEET)**

International application No.

**PCT/DK 03/00546**

The description is not in conformity with the claims as required by Rule 5.1(a)(iii) PCT.

27.  
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## CLAIMS

1. A safety-fastener to be secured by fastening, said fastener comprising at least a  
5 threaded tip and a rod, the threaded tip and rod being interconnected in a joint allowing  
transmission of rotational movement from the rod to the threaded tip in one locked state  
and preventing transmission of rotational movement from the rod to the threaded tip in  
another unlocked state  
- wherein the joint and at least a part of the locking element is positioned at a  
10 distance below the surface of the structure to which the safety-fastener is fastened  
when in use..
2. A safety-fastener according to claim 1, being adapted to allow reversible shifting  
between the locked and the unlocked state.  
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3. A safety-fastener according to claim 1 or 2, wherein the joint is locked by the insertion  
of a locking element into a rotationally locking engagement in the rod and the threaded  
tip.
- 20 4. A safety-fastener according to any of the claims 1-3, wherein the rod comprises a  
gripping means (extending in a direction opposite to the threaded tip) for applying a  
torque to the rod.
5. A safety-fastener according to claims 3 or 4, where the locking element is accessible  
25 from a top portion of the rod opposite to the threaded tip so as to allow shifting between  
the locked and the unlocked state on a mounted safety-fastener.
6. A safety-fastener according to any of the claims 3-5, wherein the joint is shifted from  
the locked to the unlocked state vice versa by the removal of the locking element from the  
30 joint.
7. A safety-fastener according to any of claims 3-5, wherein the joint is shifted from the  
locked state to the unlocked state by irreversible breaking of the locking element.
- 35 8. A safety-fastener according to claim 7, wherein the locking element is adapted to break  
at a pre-specified torque.
9. A safety-fastener according to any of claims 3-8, adapted to allow reversible shifting  
between the locked and the unlocked state by displacement of the locking element in the  
40 axial direction of the fastener.
10. A safety-fastener according to claim 9, wherein the locking element is displaced in a  
direction from the rod towards the threaded part.

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11. A safety-fastener according to claim 9, wherein the locking element is displaced in a direction from the threaded part towards the rod.
12. A safety-fastener according to any of the preceding claims, wherein the threaded part contains at least 5 threads.
13. A safety-fastener according to any of the preceding claims, wherein the length of the threaded part is at least 50% of the entire length of the safety-fastener.
- 10 14. A safety-fastener according to any of claims 3-13, wherein the rod is provided in the form of a hollow tube that houses the locking element.
15. A safety-fastener according to any of claims 3-14, wherein the rod and threaded tip comprises a hollow channel that houses the locking element.
- 15 16. A safety-fastener according to claim 15, further comprising a handle member arranged to control the moving of the locking element from a top portion, opposite the threaded tip, of the rod.
- 20 17. A safety-fastener according to claim 15 or 16, further comprising fixating means allowing fixation of the locking element in any of the first and/or the second positions.
18. A safety-fastener according to any of the preceding claims, further comprising locking means adapted to receive a pad-lock for locking the locking element in either the locked and/or the unlocked states of the fastener.
- 25 19. A safety-fastener according to any of the preceding claims, wherein the rod comprises attachment means for securing peripheral objects to the fastener.
20. A safety-fastener according to claim 19, wherein said object is selected from a group consisting of: a beach safety-box as defined herein, a beach-chair as defined herein, a parasol, a bike, a motor cycle, a boat, an animal, a fishing rod, a gun, a sculpture, a lawnmower, a garden pot and a car.
- 30 21. A safety-fastener according to any of claims 3-20, wherein the joint is shifted between the locked and unlocked state by respectively removing and inserting the locking element into the Safety-fastener.

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22. A lock safety-fastener comprising a fastener and a lock wherein the fastener contains

- an insertion-region which can be used for attachment into a solid material, and
- 5 - a lock-accepting region which protrudes from the solid material, and

wherein the attachment and locking of the lock to the lock-accepting region allows the lock to rotate freely around the lock-accepting region in its locked state thereby significantly hindering the possibility for loosening the fastener.

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23. A lock safety-fastener according to claim 22, wherein the insertion-region of the fastener is threaded and wherein the lock-accepting region comprises a gripping means for applying torque to the fastener thereby enabling the fastener to be secured by screwing.

- 15 24. A lock safety-fastener according to any of claims 22 and 23, wherein the lock is constructed such that it

- can be attached to the lock-accepting region of the fastener when unlocked
- cannot be detached from the lock-accepting region of the fastener when locked,
- 20 - can rotate freely on the lock-accepting region of the fastener when locked, and
- prevents the lock-accepting region of the fastener and the fastener-head to be accessed by gripping tools when locked .

25. A lock safety-fastener according to claim 24, wherein the lock is a code-lock.

- 25 26. A lock safety-fastener according to claim 25, wherein the lock comprising from 2 - 12 numbered discs.

27. A lock safety-fastener according to claims 25 or 26, wherein the user can program the lock.

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28. The use of a safety-fastener or lock safety-fastener according to any of the preceding claims, to secure objects against unauthorised removal.

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